

Applicant: Kari M. Mäki
Application No.: 09/966,424
Response to Office action dated Oct. 14, 2004
Response filed Jan. 12, 2005

Remarks

Claims 2–11, 19, and 20 remain pending in the application. In the Office action dated Oct. 14, 2004, claim 19 was rejected as indefinite, claims 2–11 and 20 were rejected as obvious over EP 0822473 in view of Lavigne and Myotoyama, or further in view of EP 0825506.

Several benefits of the invention are given in paragraphs [0017] and [0018] of the specification. Among other things, continuous data collection from the operation of a production plant gives enhanced possibilities of anticipating future needs of servicing. Along with the transmission of numerical and textual dat, it is also possible to transfer video and audio signals, particularly during a fault situation. The communications connection also permits special measurements to be launched remotely from the service unit.

The new method allows a realtime dialogue between an operator at the production plant and a specialist at the remote service unit during a fault situation. For instance, both parties may at the same time watch the same video clip illustrating operation of the machinery.

Information is collected from different points of the process using various information systems. The collected information or selected parts of it are input in a service system server of the production plant. Selected information is sent from the service system server to a remote service unit. In the remote service unit the information is analyzed and calculations are made to find out the state of the process. If justified by the processing of fault information concerning a machinery malfunction situation, instructions are issued to the production plant. These instructions are not the result of a single measurement but are a result of a more comprehensive analysis of the state of the process.

In paragraph [0024] of the specification it is stated that the highly automated process performed in the production plant is supervised and controlled via the internal information systems of the production plant. In the given example the information systems include, e.g., a process control system, a production management system, a maintenance information system, a condition monitoring system and a reporting system.

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The measurement unit and production control unit have been deleted in claims 19 and 20 since these are already included in the definition of an information system.

EP 0 822 473 discloses a remote maintenance system in which a host computer 107 periodically monitors the operating states of a plurality of industrial equipments 106. Upon occurrence of a trouble, the host computer 107 obtains status information such as the state of the trouble and notifies a management host computer 108 on a vendor side through the internet (col. 4, lines 4–11). Each industrial equipment 106 has a function of notifying the corresponding host computer 107 of the presence or absence of a trouble in response to a request from the host computer 107, and a function for specifying the contents of the trouble and notifying the host computer 107 of the status information representing the specified contents (col. 4, lines 31–39).

Thus the system of EP 0 822 473 contains industrial equipments 106 which are able to give information on their state to a host computer on request. The system does not contain information systems similar to those of the present invention where the information systems supervise and control the production process of the production plant.

Furthermore, EP 0 822 473 concerns the manufacture of semiconductors, which is very much different from production or finishing of pulp, paper or board. The latter requires wide and complicated process control systems whereas in the former EP 0 822 473 indicates it is enough to monitor the operation of individual industrial equipments.

Lavigne represents the prior art in the field of automation systems for a pulp or paper mill. The system of Lavigne is very hierachic and complex. Combining a remote analysis system with an automation system like Lavigne would not be obvious because the examiner has not found the motivation and expectation of success within the prior art. The point is not that an equipment periodically receives an automatic inquiry to which it may respond or not, which indicates malfunction as in the EP document. The question is that the colossal amount of data received from different points of the process can be analyzed online and activities may be recommended on the basis of the analysis and maybe also performed remotely. Thus combining the teachings of Lavigne with EP 0 822 473 would not give as a result a system

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corresponding to the present invention.

Finally, it would not have been obvious to a skilled person to modify the teaching of EP 0 822 473 by replacing a semiconductor manufacturing plant with a totally different plant for production of pulp, paper or board or for finishing paper, the plant comprising other kinds of processes which are supervised by other kinds of control systems without some expectation of success contained in the prior art.

In combining EP 0 822 473 with Myotoyama and EP 0825506 the examiner has not provided expectation of success for the combination as proposed.

Applicant believes that no new matter has been added by this amendment.

Applicant submits that the claims, as amended, are in condition for allowance.
Favorable action thereon is respectfully solicited.

Respectfully submitted,



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